

What is Claimed is:

5. The layer 2 link handler as described in claim 1, wherein said path connection means recognizes the labels of layer 2 packets that arrive from the permanent virtual connection path with the user-side device and to which labels are assigned for each layer 2 link, and transfers the layer 2 packets to the path to the specified connection destination that corresponds to a given label, and recognizes the labels of labeled layer 2 packets that arrive from the path with the specified connection

6. The layer 2 link handler as described in claim 4, wherein said labeling means includes a selecting means that, when a label is newly assigned to a layer 2 link, selects an arbitrary available label number and emits a labeled layer 2 packet, and said path connection means handles the link of the labeled layer 2 packet that is assigned the same label number and is sent back from the side of the device that received said labeled layer 2 packet, as a link of the pair of said layer 2 link newly assigned a label.

8. The layer 2 link handler as described in claim 4, wherein said labeling means, when it newly assigns a label to a layer 2 link, determines the label number by doing a negotiation mutually with another device side.

10. The layer 2 link handler as described in claim 5, wherein said path connection means recognizes the labels of layer 2 packets that arrive from the permanent virtual connection path with the user-side device and to which are assigned labels according to the quality-of-service class of each layer 2 link, and transfers layer 2 packets to the path to the specified connection destination that corresponds to the given label.

12. The layer 2 link handler as described in claim 5, wherein said path connection means recognizes the labels of layer 2 packets assigned according to the distribution type of service in the IP packet within layer 2 link packets that arrive from the permanent virtual connection path with the user-side device, and transfers layer 2

13. The layer 2 link handler as described in claim 1, wherein said path connection means includes an extracting means that extracts the request connection destination name from layer 2 link information emitted from the user-side device at the time of a layer 2 link connection request and a conversion table that converts from said connection destination name to a connection address, and path determining means that uses a connection address obtained from said conversion table to cause a path to be connected between the user-side device and the specified connection destination.

15. A layer 2 link path connection method comprising the steps of providing a layer 2 link handler connected by a permanent virtual connection path with the user-side device, extracting by said handler a request connection destination name from layer 2 link information emitted from a user-side device at the time of a layer 2 link connection request, extracting a connection address from said connection destination name by means of a conversion table, and notifying the user-side device connected by a permanent virtual connection path of said connection address, emitting by the user-side device the connection destination address it has been notified of to the network-side device, and based on said connection destination address connected by the network-side device the user-side device and the connection destination by switching of one of permanent virtual connection paths and switched virtual connection paths.